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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,412	02/17/2004	Robert A. Handly	HandlyRA-004	1299

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EXAMINER	
WRIGHT, PATRICIA KATHRYN	
ART UNIT	**PAPER NUMBER**
1743	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/780,412	HANDLY, ROBERT A.	
	Examiner	Art Unit	
	P. Kathryn Wright	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response, dated June 22, 2007, in reply to the outstanding Office action, mailed March 23, 2007, has been entered and considered. Any objection/rejection not repeated herein has been withdrawn. Applicant's Declaration under 37 CFR 1.132, filed June 22, 2007 has been accepted by the Examiner as showing Application Number 10717,810 was derived from the current inventor and is thus not invention "by another".

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are now rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Office cannot locate where in the specification the newly added limitation "said sorbent material being selected for adsorbing material from said air and for releasing only said adsorbed material into said gas when said outer barrel is heated". This new limitation is found in claims 1, 11, and 16. The specification at page 4, lines 9-12 discloses "the air in the depot or environment is drawn through the thermal

desorption tube by a pump or blower over a predetermined time period whereby the sorbent or adsorbent adsorbs the sorbate or chemical of interest in the air which flows through the thermal desorption tubes. Thermal desorption tubes may be used to detect even very low levels of the desired element in the air that may be at such minute concentrations as to not be detectable by other means. The sample is then thermally desorbed into a gas chromatograph for separation and detection typically utilizing heating means, purge gases, filters, and the like." The specification does not disclose that only sorbent material is released from the adsorbed material into the gas when the outer barrel is heated.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Luckey (US Patent No. RE.27,008). Luckey teaches a thermal desorption tube 11, comprising a glass outer barrel 22 which is fire polished (col. 2, lines 35-43), a plurality of spacers 17A-D made from a glass material (i.e., glass grit; col. 2, lines 59-60) which conform to the barrel thereby forming "tubular spacer". The spacers of Luckey are insertably positioned within the outer barrel at the first and second, respectively. The spacers of Luckey support the

sorbent material 16A-C. Luckey also teaches two glass wool plugs 19 positioned within the tube (claim 9).

Luckey does not explicitly teach the process of centerless grinding where by tolerances for the outer diameter being equal to or less than plus or minus 0.001 inches are created to providing a seal when inserted into the fitting is considered as a product-by-process limitation. Since the end product (tube 11) of Luckey is identical to the instant claim, it's reasonable to expect that the outer diameter of the tube has tolerances equal to or less than plus or minus 0.001 inches. Furthermore, the fitting for receiving the tube has not been positively recited in the claims, and therefore does not carry patentable weight. Applicant is again reminded that the product-by-process claim is always drawn to a product, not the process. The reference need only to *substantially meet* the structure of the end product.

Similarly, the Office has interpreted the process of adsorbing material from the air and releasing only the adsorbed material into the gas as a product-by-process step. Furthermore, in the instant specification at page 17, lines 19-22, one embodiment of the sorbent or adsorbent material 22 comprises silica gel. Luckey teaches a sorbent/ adsorbing material 16A-C made of silica gel (see col. 2, lines 50-58).

Claims 1,3-4, 7-8 and 12-14 remain interpreted as product-by-process claims, since a product-by-process claim is one in which the structural scope of the product is defined at least in part in terms of the method or process by which it is made.

For example, the thermal desorption tube (end product) of claim 1 is defined by the following steps, "a centerless ground tubular outer barrel which is centerless ground

to said centerless grinding tolerance" and, "...said at least one tubular inner spacer being secured to said first end of said centerless ground outer barrel in a manner which does not alter said centerless grinding tolerance so that said first end of said centerless ground outer barrel is insertable into said fitting for providing said seal with said fitting..."

Applicant is reminded that the product-by-process claim is always drawn to a product, not the process. The reference need only to *substantially meet* the structure of the end product. As set forth above, the desorption tube of Luckey meets the entire structural requirements of the desorption tube as set forth in the instant claims.

Furthermore, since the spacers 17A-17D and the outer barrel 22 are both made from a glass material, it is reasonable to expect that the spacer and outer barrel will fuse together by heating in a manner similar to that described in col. 2, lines 39-44. Thus, the desorption tube of Luckey is made by a process substantially identical to the product-by-process limitations set forth in claims 3, 4, 8, 12-15

Please note that an argument that the applied reference fails to meet all claimed process steps/limitations of making the product does not overcome a proper 102/103 rejection because the reference need only to *substantially meet* the structure of the end product, see MPEP 2113 [R-1] and *In re Fessmann*, 489 F.2d 742, 744 180 USPQ 324, 326 (CCPA 1974).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luckey (US Patent No. RE.27,008) in view of Asbridge (US Patent No. 2,023,720).

The teachings of Luckey have been summarized previously, *supra*. Luckey teaches a method of making a desorption tube comprising, inserting the glass grit spacers 17A-D into the barrel, resulting in them being mounted at one end of the barrel and inserting sorbent material 16 into the tubular member. Furthermore Luckey teaches a flame treating (i.e., heat treating) the ends so that tube has no rough or sharp edges around the openings (col 2, lines 35-44). It is inherent in Luckey that the glass grit spacers and the glass barrel of the tube would fuse if heated simultaneously by the flame method described to a point where the glass reaches its softening temperature.

However, Luckey fails to disclose the step of centerless grinding the combination of the first inner tubular spacer and outer barrel within a centerless grinding tolerance. However, the use of centerless grinding in the analytical art is well known, see Asbridge. Asbridge teaches a process of centerless grinding a cylindrical tube within a

centerless grinding tolerance (see col. 1, lines 1-45; Figs 1-14). Please note, that the claims do not require the ends (first end, second end) of the tube be centerlessly ground, rather just the outer surface along the longitudinal axis of the tube.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include in Luckey the step of centerless grinding the combination the barrel containing the tubular spacer, as set forth in Asbridge, since the process consistently produces containers with a wall of uniform thickness which may be desirable for uniform heating along the cylindrical axis of the tube.

Terminal Disclaimer

8. The terminal disclaimer filed on June 22, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/717,810 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

9. Applicant's arguments filed June 22, 2007 have been fully considered but they are not persuasive.

Regarding the rejection of claims 1-15 under 35 USC 102(b) as being anticipated by or, in the alterative, under 35 USC 103(a) as obvious over Luckey (US Patent No. RE 27,008), Applicant argues that Luckey makes statements that are inconsistent with the outer barrel being "centerless ground". Applicant points to col. 2, lines 37-43, in

which Luckey states the one end of the outer barrel 11 has "rough or sharp edges" and the other end is "flame treated", which allegedly alters the tolerance of the tube. Applicant alleges that this is inconsistent with close tolerances obtained by the claimed process. Thus, the resultant tube tolerances will be not be accurate as per Applicant's claim. Applicant concludes that the end product (centerless ground thermal desorption tube) is not the same.

The Examiner respectfully disagrees with Applicant's assertion that Luckey makes statements with the outer barrel being centerless ground and that the product inconsistent with close tolerances if flame treated, since the instant specification teaches the "[c]enterless ground outer barrel 12 in accord with the present invention may be high purity labeled, have various wall thicknesses, may be tapered, colored, translucent, have raw ends, or may be fire polished at selected positions." Thus, the term "centerless ground tube" is interpreted as a tube with raw edges and/or fire (flame) treated ends.

Furthermore, an argument that the applied reference fails to meet all claimed process steps of making the product does NOT overcome a proper 102/103 rejection of a product-by-process claims because the reference needs only to substantially meet the structure of the end product (i.e., tube). In order to overcome the rejection, applicant needs to show that the claimed process imparts an unexpected property or structure to the end product that renders the structure product patentably distinct from the prior art's. See *Ex parte Gray*, 10 USPQ2d 1922 (BPAI 1989). See also MPEP 2113.

With respect to Applicant's argument that Luckey's spacers 17A-D are inert granules and are not "tubular spacers". The Examiner again disagrees since the inert granules are glass grit particles that will conform to the interior shape of the tube when inserted therein (i.e., tubular shape). The glass grit also acts as "spacers" between the sorbent/ adsorbent material and wool plugs 19. Furthermore, since the spacers 17A-17D and the outer barrel 22 are both made from a glass material, it is reasonable to expect that the spacer and outer barrel will fuse together by heating in a manner similar to that described in col. 2, lines 39-44. Thus, the desorption tube of Luckey is made by a process substantially identical to the product-by-process limitations set forth in the claims. Applicant must prove by way of evidence, not argument, that the prior art product do not necessarily or inherently possess characteristics of his claimed product where claimed and prior art products are substantially identical (see *In re Best*, 195 USPQ 430 (CCPA 1977)).

With respect to Applicant's argument that Luckey's reactant is not a sorbent material chosen to desorb or release the adsorbed material, the Examiner respectfully disagrees. The new limitations claims 1 and 11 describing "removing the adsorbed material into the gas when the outer barrel is heated" have been treated as a product-by-process steps. Applicant's specification at page 17, lines 19-22, describes one embodiment of the sorbent or adsorbent material 22 comprising silica gel. Similarly, Luckey teaches a sorbent/ adsorbing material 16A-C made of silica gel (see col. 2, lines 50-58). There is nothing to indicate that the silica gel of Luckey would not be capable of adsorbing material from the air and releasing only the adsorbed material into the gas

when heated. Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical structure (silica gel), the properties applicant discloses and/or claims are necessarily present. *In re Spada,* 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

With respect to the rejection of claims 16-20 under 35 U.S.C. 103(a) as being unpatentable over Luckey (US Patent No. RE.27,008) in view of Asbridge (US Patent No. 2,023,720), Applicant argues that Asbridge teaches nothing about desorption tubes or (fusing destroying?) the centerless grinding tolerance (of the tube).

The Examiner does not agree. First, claims 16-20 do not disclose fusing destroying the centerless grinding tolerance. Furthermore, Luckey is relied upon for the teaching of desorption tube, not Asbridge. Asbridge is relied upon for teaching centerless grinding a cylindrical workpiece to the desired diameter. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that Asbridge is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this

case, the prior art reference is reasonably pertinent to the particular problem with which the applicant was concerned (i.e., producing cylindrical workpieces with uniform wall thickness).

Accordingly, the rejections of all the claims are hereby maintained.

Conclusion

10. No claims allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Wright, f.k.a. Bex, whose telephone number

is 571-272-2374. The examiner can normally be reached on Monday thru Thursday, 9 AM to 6 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

pkw

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